REMARKS/ARGUMENTS CONCERNING AMENDMENTS

Cancellation of Claim 17 complies with the Office's requirement to do so and is consistent with Applicants' response to the Restriction requirement. The act of canceling Claim 17 does not add new matter.

Applicant amends Claim 33 to delete 'about". Applicant respectfully asserts that the amendment does not constitute new matter.

REMARKS/ARGUMENTS CONCERNING THE RESTRICTION AND CLAIM REJECTIONS

Applicant thanks the Office for pointing out an inadvertent oversight. Applicants' prior listing of Claims designates Claim 17 as withdrawn, but the revised response did not affirmatively cancel Claim 17. This paper does so. As such, Applicant respectfully contends that the cancellation complies with the Office's requirement and removes the issue from further discussion.

The Office rejects Claims 1 – 11 and 32 under 35 USC 102(b) as being anticipated by Nagata et al. (U.S. Patent Number 5,567,744). The Office suggests that "744 teaches the same polymer blend as Applicant claims and that such a blend would inherently be extrudable. The Office opines that stirring and mixing components at or near the softening or melting point of a thermoplastic polymer is the same thing as melt mixing.

Applicant respectfully traverses the rejection of Claims 1 – 11 and 32 under 35 USC 102(b). Applicant contends that the teachings of Nagata et al. differ from the claimed invention in at least two critical aspects. First, contrary to the Office's assertion, Nagata et al. neither teach nor suggest that a blend of a high water absorbent resin and a thermoplastic resin be melt-mixed". Second, Nagata et al. neither teach nor suggest that the thermoplastic resin interact ionically or covalently with a high water absorbent resin or superabsorbent resin.

Applicant respectfully asserts that a fair reading of Nagata et al. fails to reveal any basis, other than the paragraph bridging columns 3 and 4 and, possibly, Example 6, for concluding that Nagata et al. teach or suggest melt mixing. In fact, Nagata et al. expressly avoid melting the thermoplastic polymer in both the segment cited by the Office, which relates to use of an adhesive binder, and in column 4, lines 52 – 58. Nagata et al., in both column 3, lines 48 – 57, and in column 4, lines 52 – 58, soften, but to not melt the thermoplastic polymer. Nagata et al. expressly teaches heating "near" the softening point or melting point. Nothing in this express teaching even hints at temperatures in excess of the melting point, a necessary condition in

melt mixing. Any attempt to read such a hint into the express teaching flies directly into the face of Claims 2 and 8 which bar use of temperature "sufficient to coalesce the thermoplastic resin". In melt mixing, one cannot avoid coalescing the lower melting point component, the thermoplastic resin, of Applicants claimed blend.

Notwithstanding Nagata et al.'s use of the phrase "melt it" in the paragraph bridging columns 3 and 4, the balance of Nagata et al., including the segments noted in the immediately preceding paragraph, suggests that such melting is no more than surface melting that allows the thermoplastic resin grains to adhere to the surface of the high water-absorbent resin grains yet retain their granular structure. See column 5, lines 22 -30.

Applicant attaches a Material Safety Data Sheet (MSDS) published by Sumitomo Chemical Company, the producer of FLO-BEADS™ EA-209. The Office will note that the softening point is 84°C and the melting point is presented as a range of from 90°C to 105°C rather than "about 90°C" as reported by Nagata et al. Accordingly, it is unclear whether the 100°C temperature used in Example 6 exceeds the melt temperature of FLO-BEADS EA-209.

The compositions taught by Nagata et al. may, notwithstanding the size differences, be likened to a sugar-coated donut hole. The sugar crystals lightly adhere to the surface of the donut hole as a result of mixing hot donut holes fresh from the fryer with granulated sugar. The sugar crystals, like the thermoplastic resin grains of Nagata et al. retain their granular structure.

The claimed compositions do not resemble the compositions taught by Nagata et al. Applicant invites the Office to consider the paragraph found at page 7, lines 21 – 29, of the Application. In that paragraph, Applicant defines "extrudable thermoplastic superabsorbent polymer blend composition". By adding the modifier "melt mixed", Applicant goes beyond the potential for melt processability to a requirement that the composition undergo melt mixing. See also page 9, lines 17 -19 for a reference to "extrudate from the melt mixing". In addition, see the reference to melt blending in the Example section at page 11, lines 8 – 12. Applicant also invites the Office to consider the paragraph at line 8, lines 7 – 10, which refers to co-

continuous phases or separate phases wherein one phase is continuous and the other phase is dispersed therein. In other words, the claimed compositions differ physically from those taught by Nagata et al.

Nagata et al. teach compositions that differ chemically from those of the claimed invention. Applicant clearly requires the presence of a thermoplastic resin that contains a functional group which interacts ionically or covalently with the superabsorbent polymer(s). See e.g. Claim 1. Nagata et al. neither teaches nor suggests that such functional groups are necessary or even desirable. In addition to the paragraph found at page 8, lines 7 – 10, Applicant invites the Office to consider the paragraph found at page 5, lines 22 – 31, especially lines 29 – 31. From these two paragraphs, one can reasonably infer that the ionic or covalent reaction occurs during melt mixing. In the absence of both the functional group and melt mixing, one does not attain the claimed invention.

Applicant provides a large number of examples of the present invention and an even greater number of comparative examples. The comparative examples, especially AB – AN in Table 2 are not extrudable. From the data in Table 2, one can see that even the nominal presence of a functional group does not make a composition "extrudable". See, for example, Comparative Examples AL with an acrylic acid content of 6.5% and AM with an acrylic acid content of 20.5% in contrast to Examples 14 with an acrylic acid content of 9.7% and Example 15 with an acrylic acid content of 15%. Comparative Example AL, with an acrylic acid content of 6.5% is close to Nagata et al. Example 6 with an acrylic acid content of 7.0% (See attached MSDS). In the absence of melt mixing and an adequate amount of the proper thermoplastic resin, one does not obtain an "extrudable" blend that falls within the scope of Applicant's Claim 1. Applicant respectfully submits that the present Application provides ample guidance for a skilled artisan to determine what falls within the scope of the pending claims without undue experimentation.

Applicant respectfully asks the Office to consider the fact that many of the thermoplastic resins listed by Nagata et al. do not contain a required functional group. See, e.g. polyethylene, low molecular weight polyethylene waxes and

polypropylene. Applicant shows that various polyethylenes are not "extrudable" in Comparative Examples A –J and AB – AI. Comparative Example K makes the same point for polypropylene. Tables 1 and 2 also show that other resins listed by Nagata et al. do not work. See e.g., Comparative Examples PP and QQ for ethylene/vinyl acetate copolymers, Comparative Examples M –O for ethylene/acrylic ester copolymers, Comparative Example V for ethylene/acrylic ester/maleic anhydride terpolymers, Comparative Examples RR and SS for copolyesters, and Comparative Examples TT and UU for polyamides.

Applicant respectfully contends that the various comparative examples, especially those highlighted in the immediately preceding paragraph, clearly demonstrate that Nagata et al. do not anticipate the claimed invention. Just as clearly, Nagata et al. do not guide a skilled artisan to even move in the direction of the claimed invention, much les make it obvious.

The Office rejects Claim 33 under 35 USC 103(a) as being unpatentable over Nagata et al. as applied to Claim 1. The Office notes that Nagata et al. teaches that the thermoplastic resin is present in an amount of from 1 to 50% by weight based on total blend weight. The Office asserts that Applicant's use of "about" in Claim 33 creates an overlap with the range taught by Nagata et al.

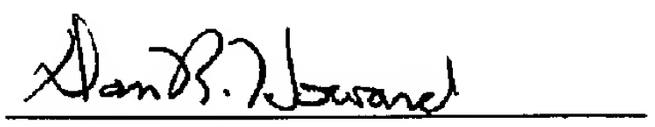
Applicant amends Claim 33 to remove any potential overlap with Nagata et al. In the absence of any overlap and in view of the fact that Nagata et al guide a skilled artisan away from the amount of thermoplastic resin specified in amended Claim 33, Applicant respectfully submits that Nagata et al. fails to support an obviousness rejection under 35 USC 103(a).

Applicant respectfully seeks withdrawal of the rejections presented by the Office together with allowance of Claims 1 – 11, 32 and 33 at an early date.

Applicant believes that timely submission of this response and maintaining the same number of claims generate no additional fees.

If the Office believes that a telephone interview would be helpful, Applicant respectfully asks the Office to contact the undersigned to set up such an interview.

Respectfully submitted,



Dan R. Howard
Registration No. 30,070
Phone: (989) 636-7494

P. O. Box 1967
Midland, MI 48641-1967
DRH/akm